# BOH SOLUTIONS OPERATION MANUAL BOH MULTI-PLATFORM MODULE (MPM) (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)

**CHAPTER 4** 

**OPERATOR MAINTENANCE INSTRUCTIONS** 

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# BOH SOLUTIONS OPERATION MANUAL BOH MULTI-PLATFORM MODULE (MPM) (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)

#### INTRODUCTION TO PREVENTATIVE MAINTENANCE CHECKS & SERVICES (PMCS)

INITIAL SETUP:	
Materiel/Parts	References
None	None
Personnel Required	Equipment Condition
One	BOH MPM MODULE Set-up

#### INTRODUCTION TO PREVENTATIVE MAINTENANCE CHECKS & SERVICES (PMCS)

Preventative Maintenance Checks and Services (PMCS) are performed to keep the MPM in good operating condition. These checks aid in finding, correcting, or reporting problems. Operator personnel are to perform the PMCS tasks as shown in the PMCS table.

Perform PMCS procedures each day the MPM is in operation, using the PMCS table in WP 0014 00. There are different intervals to perform PMCS procedures: before, during and after using the equipment, as well as weekly and monthly. Look at the table carefully to identify the required PMCS interval.

Perform all checks and services keeping in mind the following guidelines:

- Before you begin using the MPM, do Before Operation PMCS
- While the MPM is in use, do During Operation PMCS
- After using the MPM, do After Operation PMCS

If you find something wrong when performing PMCS, fix it using troubleshooting and/or maintenance procedures. Pay attention to WARNING and CAUTION statements. A **WARNING** means someone could be injured or killed. A **CAUTION** means equipment could be damaged.

If tools that are required to perform PMCS are not listed in the procedures, notify your supervisor.

#### Inspection

Look for signs of trouble. Use your senses to feel, smell, hear, or see problems that may exist. Inspect to see if items are in good condition. Are components correctly installed and secured? Is any damage to the frame or components visible? Correct any faults or notify Unit Maintenance.

# **Associated Components**

There are some common items to check on the MPM and associated equipment. These include the following:

- Condition and proper connection of ratchet straps.
- Condition and proper connection of the adapter.

#### Service

Proper service of the MPM and components is an integral part of maintenance. Regular cleaning prevents possible problems in the future, so make it a habit to clean the MPM and components whenever necessary.

# BOH SOLUTIONS OPERATION MANUAL BOH MULTI-PLATFORM MODULE (MPM) (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)

#### **PMCS TABLE**

INITIAL SETUP:	
Materiel/Parts	References
Rags, Water	None
Personnel Required	Equipment Condition
One to four	BOH MPM MODULE Set-up

# Table 1 Preventative Maintenance Checks and Services for the MPM PMCS B (Before), D (During), A (After), W (Weekly), M (Monthly)

	в	D	Α	w	м	Inspection Item and Procedure	Equipment Not Ready/Available If
1	*		*	*		<b>RACHET STRAPS</b> Check for missing ratchet straps. Each adapter should have two ratchet straps. Check ratchet straps for tears, frays or discoloration. This will indicate failure of the strap. Check ratchet mechanism for proper operation. Replace as needed.	WARNING: Ratchet straps that are damaged or missing from adapter could cause injury or damage to the equipment. See WP 0006
2	*		*			MODULE TRAYS AND CASES Check all frames for cracks, dents, holes, or loose/missing hardware. Check frame latches for freedom of operation. Check spring for distortion. Check for accumulations of dirt, debris, ice, snow, or salt. Clean as required. Lubricate with WD-40 lubricant spray. Replace missing or damaged hardware.	Weld crack damage will cause malfunction and hazard or injury.
						Check drawer tray latch and drawer stop block for damage.	<b>WARNING</b> : Discontinue use of drawer until the damaged part is replaced. Failure to comply could cause serious injury.
3					*	Lubricate hinges, latches, with WD-40 lubricant spray as required.	Hinges and latches do not operate smoothly.
4	*		*	*		<b>DRAWER Exterior</b> Check all exterior surfaces for cracks, dents that affect the operation of the module system. Check drawer latches for freedom of operation. Check for loose rivets. Check for accumulations of dirt, debris, ice, snow, or salt. Clean as required.	Damage that would cause malfunction of the module system or cause hazard or injury.

	в	D	Α	w	М	Inspection Item and Procedure	Equipment Not Ready/Available If
5	*	*	*	*		<b>DRAWER Interior</b> Check drawer for dirt and debris. Clean with a brush or rags as required. Check all drawer dividers for dents, bends or distortion. Replace dividers if needed.	See chapter 2 WP 0008 00-2
6	*		*		*	<b>Drawer Seal</b> Check drawer seals for cuts, cracks, distortion, proper alignment and attachment. Reattach with proper glue or replace if necessary. Check for moisture on or in material.	Failure of the seal will allow water and moisture to enter the drawer and damage the stored material in the drawer.
7	*		*		*	Attachment Rivets Check for missing or loose attachment rivets on drawer handles, drawer latches, side, front and rear drawer dividers and all frame bearing guide pads. Schedule shop replacement if necessary.	Loose or missing rivets will impede the operation and may cause injury or damage.
8	*		*		*	<b>Forklift Base Plate</b> Check for weld cracks, bends, dents or frame distortion. Check tie-down ring attaching points for weld cracks, breaks or distortion. Replace or schedule weld shop repair if needed.	Failure to repair welds or tie- down rings will cause damage or injury.
9			*		*	<b>Data Plates</b> Check plates for legibility, damage and/or missing. Clean with water and rag. Replace as needed.	N/A
	End Of PMCS Table						

# BOH SOLUTIONS OPERATION MANUAL BOH MULTI-PLATFORM MODULE (MPM) (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)

## **CLEANING AND LUBRICATING**

INITIAL SETUP:	
Materiel/Parts	References
Rags, Water, Detergent	None
Personnel Required	Equipment Condition
One	BOH MPM MODULE Set-up

#### CLEANING AND LUBRICATING

Cleaning and Lubricating of the MPM is performed to keep the module and its associated equipment in good operating condition. The cleaning and lubrication of the module can be conducted along with the Preventative Maintenance Checks and Services (PMCS) procedures described in WP 0014 00. Specific areas described below need to be cleaned after an operational event or periodically if stored/staged outside of a fixed facility to keep the modules, and accessories performing as designed. Cleaning also assists in maintaining the condition of the materiel stored within the system. Any damage discovered when cleaning and/or lubricating that cannot be corrected using the troubleshooting procedures described in WP 0012 00 should be reported for corrective maintenance.

SURFACE	OIL/GREASE	SALT/MUD/DIRT DEBRIS	RUST/CORROSION and LUBRICATION	
Exterior and Interior Detergent, Water, surfaces (All) Rags		Soapy Water, Brush, Rags	Corrosion Removal Compound and Wire Brush, Dry Rag and Spot Paint	
Seals and Gaskets	Damp and Dry Rags	Damp and Dry Rags	N/A	
Module Trays and Cases, Drawer handles, latches	Detergent, Water, Rags	Soapy Water, Brush, Rags	Corrosion Removal Compound and Wire Brush, Dry Rags, Spot Paint	
Module Frames and Forklift Base Plate	Detergent, Water, Rags	Brush, Soapy Water, Brush, Rags	Corrosion Removal Compound and Wire Brush, Dry Rags, Spot Paint	
Guide Pads	Detergent, Water, Rags	Damp and Dry Rags	WD-40 lubricant spray as needed	
Ratchet Straps	Detergent, Water, Rags	Damp and Dry Rags	N/A	
End of Cleaning Table 1				

#### Table 1 Cleaning

USAGE	FLUID or LUBRICANT	CAPACITIES	EXPECTED TEMPERATURES	INTERVAL
Drawer Slam Latches	Molykote Multipurpose Synthetic Grease P/N 26040124	As Required	All Temperatures	Monthly or as required if under adverse conditions
Drawer Lid Seals	N/A	As Required	All Temperatures	Monthly or as required if under adverse conditions
Ratchet Straps	N/A	As Required	All Temperatures	Monthly or as required if under adverse conditions
End of Lubrication Table 2				

# BOH SOLUTIONS OPERATION MANUAL BOH MULTI-PLATFORM MODULE (MPM) (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)

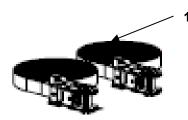
# **INSPECTION OF RATCHET STRAPS**

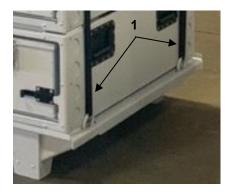
INITIAL SETUP: Materiel/Parts None Personnel Required One

References Chapter 2 WP 0006 00-4 to 00-6 Equipment Condition BOH MPM MODULES Set-up

#### **INSPECT RATCHET STRAPS**

- 1. Check for missing ratchet straps (1). Check straps for cuts, wear, frays and discoloration.
- 2. Check for proper tension of straps for proper connection to the forklift base plate.







Ratchet Straps (1) that have cuts, frays, signs of wear and discoloration indicate weakness, and the entire ratchet strap should be replaced immediately. Failure to replace could cause injury to personnel. Ratchet straps should be secure and tensioned for smooth, stable, safe operation of the module.

# END OF WORK PACKAGE

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# BOH SOLUTIONS OPERATION MANUAL BOH MULTI-PLATFORM MODULE (MPM) (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)

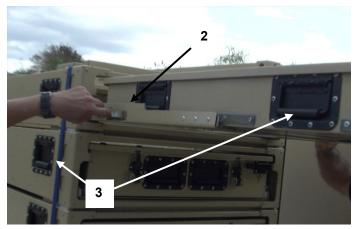
# **INSPECTION OF LATCHES AND HANDLES**

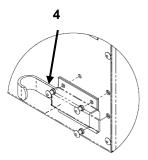
INITIAL SETUP:	
Materiel/Parts	References
None	WP 0006 00
Personnel Required	Equipment Condition
One	BOH MPM MODULES Set-up

# INSPECT LATCHES AND HANDLES

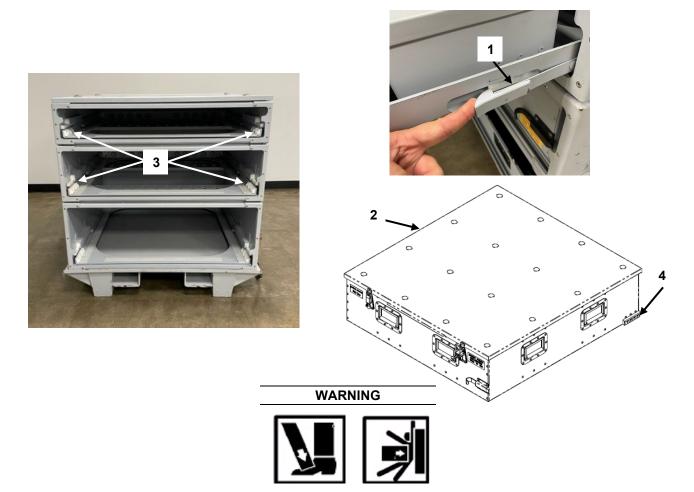
- 1. Check for missing or damaged ratchet straps, front and rear (1)
- 2. Check drawer release operation (2).
- 3. Check for missing or damaged drawer handles and case handles (3).
- 4. Check the slam latch for damage and operation (4).







- 5. Release and pull out the drawer by the handles to the full extended position.
- 6. Check drawer tray release (1) and drawer stop block (4).
- 7. Remove the drawer (2).
- 8. Check for missing or damaged guide strips (3).
- 9. Check for external damage, dents or holes to the drawer (2).



When pulling the drawer to its fully extended position, ensure there is no damage to the drawer tray latch or drawer guides. Should these parts become damaged, the drawer may bypass the tray latch causing serious injury.



Missing or damaged latches will cause injury to personnel during operation or movement of the module. Notify maintenance of any missing parts, damage or problems with operation of latches or handles. Repair or replace missing or damaged latches or handles immediately.

# END OF WORK PACKAGE

# BOH SOLUTIONS OPERATION MANUAL BOH MULTI-PLATFORM MODULE (MPM) (INCLUDING REPAIR PARTS & SPECIAL TOOL LIST)

# **INSPECTION OF DRAWERS, SEALS AND DIVIDERS**

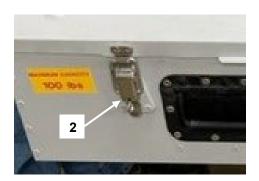
INITIAL SETUP: Materiel/Parts None Personnel Required One

References Chapter 2 WP 0008 00-2 Equipment Condition BOH MPM MODULES Set-up

#### INSPECT

#### **INSPECT DRAWER ASSEMBLY**

- 1. With the drawer pulled to the full extended position, unlatch the drawer and raise the lid (1) to the full open position.
- 2. Check for missing or damaged drawer lid latches (2).

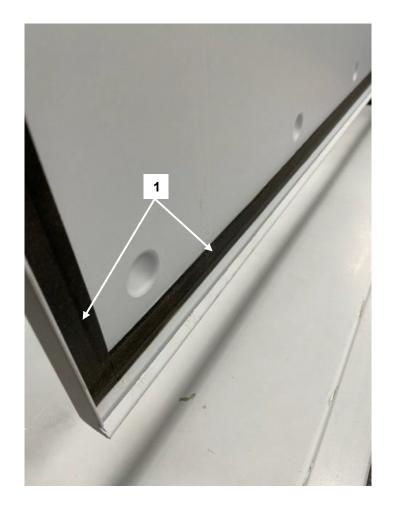




# INSPECT

# DRAWER LID SEALS

- Check for missing or damaged continuous lid seals (1).
   Check for cracks, distortion, and complete attachment.



# CAUTION

Damaged, deteriorated, or missing seals will diminish the effectiveness of the water resistance of the drawer.

## INSPECT

# **DRAWER DIVIDERS**

- Check for missing or damaged drawer dividers (1).
   Check for dirt, debris, or parts under the dividers (1).

